IN THE CLAIMS:

1. (currently amended) A sensor comprising

two conductive element layers ~~of contact material~~, and

a flexible material interposed between and in contact with the two conductive element layers ~~of contact material~~;

wherein the sensor can be used to simultaneously measure both shear and normal forces applied to the sensor.

2. (original) The sensor in claim 1, wherein the sensor is statically responsive.

3. (original) The sensor in claim 2, wherein the flexible material is elastomeric.

4. (currently amended) The sensor in claim 2, wherein the flexible material interposed between the two conductive element layers ~~of contact material~~ is a composite sheet material comprising a compliant essentially non-conductive matrix and electrically conductive elements.

5. (currently amended) The sensor in claim 1, wherein one of the conductive element layers ~~of contact material~~ is formed from multiple conductive lines or regions.

6. (original) A sensor comprising

at least two layers of contact material, and

a flexible material interposed between the two layers of contact material;

wherein at least one of the layers of contact material is formed from multiple conductive lines or regions, and the sensor can be used to simultaneously measure both shear and normal forces applied to the sensor.

7. (original) The sensor in claim 6, wherein the sensor is statically responsive.

8. (original) The sensor in claim 7, wherein the flexible material is elastomeric.

9. (original) The sensor in claim 7, wherein the flexible material interposed between the two layers of contact material is a composite sheet material having an upper and a lower surface comprising a compliant essentially non-conductive matrix and electrically conductive elements.

10. (original) The sensor in claim 9, wherein the majority of electrically conductive elements in the composite sheet material when flattened are aligned essentially into columns, the majority of columns in the region with the defined curvature being at angles less than about 90° and greater than about 15° to the lower surface of the composite sheet material.

11. (original) A method of designing an object or device comprising the steps of :

applying at least two flexible, compliant sensors capable of simultaneously measuring both shear and normal forces, to locations on a prototype design of an object or device being designed;

using the prototype design with the applied sensors in at least one application or test over a test period of time;

measuring both the shear and the normal forces encountered at the sensor locations of the prototype design over at least part of the test time period; and

modifying the design of the object or device in part based on the forces encountered by the prototype design during the application or test.

12. (original) The method in claim 11, wherein the sensor is statically responsive.

13. (original) The method in claim 12, wherein the object or device is a medical device.

14. (original) The method in claim 12, wherein the object or device is athletic footwear.

15. (original) The method in claim 12, wherein the object or device is consumer goods.

16. (original) The method in claim 15, wherein the consumer goods are automobiles.

17. (original) The method in claim 15, wherein the consumer goods are household furnishings.

18. (original) The method in claim 14, wherein the application is a sporting event.

19. (original) The method in claim 13, wherein the application is use by a patient.

20. (original) The method in claim 15, wherein the application is use by a typical consumer.